

The purpose of this Amendment is to answer technical questions in response to the Combined Synopsis Solicitation. The deadline for questions has expired. The closing date and time for submission of proposals has changed from 16 June 2005, Noon Mountain Standard Time (MST) to 30 June 2005, Noon MST. Foreword, Questions, and Answers are as follows. Foreword: This Combined Synopsis Solicitation consists of two separate projects, CLINs 0001 and 0002. CLIN0001 is a single line item that provides a software application for an existing system. CLIN0002 includes a number of subCLINs and provides a new system including hardware and a software application. The projects have some common elements. Both projects were combined into a single contract to enable more effective accomplishment by avoiding duplication of common functional and performance requirements, and by limiting the amount of GFE required for development. Auto calibration and rapid self-checks are a past and present need that YTC explored since fielding Precision Filters hardware for bridge signal conditioning. Part of the past exploration resulted in suggestions from Precision Filters for methods to employ hardware functions in a system to improve calibration and self-check performance, particularly with respect to speed. The auto-calibration and rapid self-check needs are included the SOWs for these projects. These suggestions and methodology from Precision Filters are included in an appendix to help you develop your project proposals. We want both of these projects to fully succeed. We will provide as much help as we reasonably can to result in the best possible project outcomes.

1. Question: Will CLIN 0001 and CLIN 0002 be awarded jointly as a single firm fixed price contract or may they be awarded separately: 1. Answer: There will be one firm fixed price contract. 2. Question: What is the desired/expected project timeline. Specifically, the software design meetings and first article integration and delivery. 2. Answer: Actual milestone and delivery timelines shall be proposed by you. CLIN0001 has a desired delivery target 6 months from receipt of GFE. CLIN0002 has a desired delivery target 9 months from receipt of GFE. CLIN0002xx follow on, out year items have delivery desired within no more than 4 months from purchase. These subCLINs provide the production units and system enhancements and shall be proposed by you and state delivery times. CLIN0002xx follow on items are planned as multi year efforts out to FY2010. Follow on production systems and upgrades will be purchased as YTC mission, needs, and budget allow.

3. Question: What is the delivery schedule. 3. Answer: See No. 2. 4. Question: Do you have a list of all COTS equipment. Are there any plans for buying additional hardware. Is the contractor responsible for any hardware purchases or supplying any hardware. 4. Answer: a. CLIN0001 VXI: The list is included in CLIN 0001 5.3.1. CLIN 0001 is software only. b. CLIN0002. All GFE is COTS and is listed in paragraph 9. Limited desired new COTS signal conditioning equipment is indicated in paragraph 4.2 for you to provide. Yes, you shall provide a major portion of the new hardware. Remaining new COTS equipment is left to your firm to propose, and after award, buy and integrate the best design selections for application to this project.

5. Question: How often are status reports required. Are there any DIDS requirements. Are there any additional CLIN requirements. Are there any configuration management. Are there QA/QC requirements outside of LabView code requirements, such as MIL or others. 5. Answer: a. Status reports/interchanges are desired only at key milestones of each project. The project accomplished by CLIN0002 requires at least two key milestones, which are identified in paragraph 11.1. It is up to you to propose additional key reviews

based on effective accomplishment and your design approach to build the system. b. DIDS is not required. c. Additional subCLIN requirements under CLIN0002 are listed at paragraph 11.2. for the follow on production systems and upgrade hardware and software. d. Configuration management is desired to follow best reasonable commercial practices to control and document software and hardware changes for a common system configuration. e. QA/QC requirements are expected to follow good engineering, safety, and commercial practices. No MIL specifications or standards are applied to this contract. 6. Question: Are there any security clearances required. 6. Answer: No. 7. Question: Are there any existing Test Specifications (TSPECS). 7. Answer: No, however the systems will be fully tested at acceptance to verify fulfillment of functional and performance requirements. 8. Question: Who developed the first system. 8. Answer: YTC. 9. Question: Is the existing LabView available to us, what version LabView and was it developed in and is the code available for review before the bid. 9. Answer: Applies to CLIN0001. a. The existing LabView development software is unavailable. We expect that you own or will own this product. b. We prefer to not release much of our existing code, which was created with LabView ver. 6i. We expect that you will do significantly better and we prefer to not start off with the possibility of having our VIs/code recycled. 10. Question: Do you have any fixture diagrams including all equipment in test set and wiring diagrams or configuration information. 10. Answer: CLIN0001: A block diagram overview is presented following this section of questions. 11. Question: Is the test set including all COTS hardware and wiring. Is the new system going to change at all. 11. Answer: a. CLIN0001. Yes. All hardware and wiring is on hand and is YTCs responsibility. b. CLIN0002. The new system will differ significantly from the system at CLIN0001 although it will have some common features. The new system is planned to eventually replace the system at CLIN0001. For CLIN0002, we need you to provide all non-GFE hardware, software, wiring, and signal input pigtail cables. Changes are anticipated in the future to expand system functions and capabilities and we desire your help on these as well. 12. Question: How long did the current system take to develop. 12 Answer: CLIN0001: We have no applicable and useful answer to this question. YTCs mission is testing. Our instrumentation development context, conditions, and style are much different from the environment expected in a professional instrumentation integration firm. For example, the current system was developed: Without the benefit of expert software engineering help and practices. Often on a learn as you create basis. By non programmer, but very good senior technicians. Concurrently and intermittently with other duties. Incrementally as hardware changes occurred. 13. Question: Do you expect GUI layout as part of the proposal or to be defined as part of the design phase. Difference. 13. Answer: a. No specific GUI layout is required for the proposal. GUI definition during design is considered more appropriate. b. However, representative, existing examples from a similar previous project is welcomed as part of past accomplishments. 14. Question: Is there a possibility for this contract to be converted to a T and M project given that some of the specifications are not specific. The word approximate is used in the following: Statement of Work CLIN 0002, Section 3.1 The following list reflects the approximate planned system quantities. These are likely to vary based on mission and budget. a. Basic Systems, approximately 8 channels 9 b. Intermediate Systems, approximately 32 channels 8 c. Large Systems, approximately 128 channels 3. 14. Answer: a. As stated in the Combined Synopsis Solicitation the

contract award will be firm fixed price. b. See No. 2 and No. 46. 15. Did a third party help write the RFP. 15. Answer: No. 16. Question: What is the expected Delivery Date of production deliveries. 16. Answer: See No. 2. 17. Question: Who is responsible for environmental testing. Does YTC have environmental chambers. 17. Answer: Testing will test the delivered systems in typical, local, ambient field use or simulated field use. Mounting to shakers or test usage in climatic chambers is not planned. 18. Question: Do you expect the work to be done on or off-site. 18. Answer: System development and fabrication is expected primarily at your facility with potential minimal work at YTC. 19. Question: Is there an incumbent. 19. Answer: No. 20. Question: Is there any follow on maintenance/operations requirements after the software is created and installed. 20. Answer: CLIN0002: YTC will operate the systems and provide user maintenance. We expect infrequent maintenance requirements. We may require your help or help from the COTS equipment manufacturers for specialized repairs. Please also see No. 46. 21. Question: How long of a performance period is anticipated. 21. Answer: See No. 2. 22. Question: Under CLIN 0001, how much access to the hardware will be provided. 22. Answer: YTC plans to ship the following in a spare 19-inch rack (24 inches x 30 inches x 60 inches) to you for use on the projects. Tektronix VXI mainframe Vx1410A, PCI-MXI-2 kit, VXI cables, Precision filters 28016 mainframe, ITS 6115G-TSM, VX4244, VX4780, 27104, 28104, 28334, Kinetics V200, and Symmetricom bc637PCI cards. 23. Question: Under CLIN 0001, what is the expected timeframe. 23. Answer: See No. 2. 24. Question: Will we have access to existing instrumentation for CLIN 0001 at our facility. Is there a desired delivery date. 24. Answer: We plan to ship the GFE to you within 30 calendar days after award. We want the GFE returned within 30 calendar days after final acceptance. 25. Question: CLIN 0001: will the previous software versions, such, as v1.xx be available for leveraging code to incorporate into the new v2.0. If so, what major elements of the code will be available. If so, what percentage is written in LabView. If so, will the developers of v1.xx and previous versions be available to address questions upon contract award. 25. Answer: VXI: Previous versions will not be made available. Version 2.0 is intended to be a complete rewrite in order to take maximum advantage of the newest LabView feature set. However, the Impulse Noise/BOP algorithm code will be provided. All of the code is written in LabView. The developers of v1.xx will be available. 26. Question: Statement of Work CLIN 0001, Section 5.3.1 is somewhat inconsistent with CLIN 0002, Section 3.3. For example the velocimeters identified in CLIN 0002 are not mentioned anywhere in CLIN 0001. Are we to cost this and other software integration tasks mentioned in CLIN 0002 as part of the overall software Statement of Work even though it was not directly stated as a CLIN 0001 effort. 26. Answer: a. No, The CLIN 0001 software is only intended to control the hardware listed in CLIN 0001. b. CLIN0001 and CLIN0002 present two independent projects. Some GFE, highly desired hardware, and functions are common. Items not in common include the velocimeters, sequencing, certain chronography functions, and pan/tilt for the velocimeter antennas. Please consider these as two separate projects that have some common areas you can exploit to make your engineering more effective and the end products more capable and affordable. 27. Question: Statement of Work CLIN 0001, Section 5.3.1 identifies hardware modules that might not (and will not) be included in deliverable systems. For example, the v200 does not meet the minimum digitizing requirements of CLIN 0002 but the software shall be capable of interactively controlling

a v200. How do you envision the software development and checkout proceeding for hardware like this. GFE. On site. 27. Answer: CLIN 0001 and CLIN 0002 are separate efforts for two separate systems. 28. Question: Statement of Work CLIN 0001, Section 5.4.1.2: Will YTC be providing the Windows SDK for the BC637PCI or any existing LabView drivers. 28. Answer: Windows SDK for bc637PCI , yes. Existing YTC created drivers, no. All available COTS drivers and manuals will be provided. 29. Question: Statement of Work CLIN 0001, Section 5.6.5 – Do you currently have TEDS sensors? If yes, what is the make and model of each. Do you currently have instrumentation to communicate with TEDS sensors. If yes, what is the make and model of each. 29. Answer: No. 30. Question: Statement of Work CLIN 0001, Section 5.6.9: Can YTC provide normalization algorithm by 10 June 2005. 30. Answer: The normalization algorithm is not intended to be fixed, but something we can change as needed. We currently take an array subset of the beginning 30 percent of the pretrigger, find the average value, and subtract the average value from each data point in the signal. 31. Question: Statement of Work CLIN 0001, Section 5.6.12 : Is it possible to limit the number of iterations of calculated channels from other calculated channels during run time, i.e. acceleration from velocity from displacement is ok, but not further calculations on acceleration. 31. Answer: It depends on the definition of run time. This system's primary role is as a transient data capture system. The normal mode of operation is to collect data from a test event, generate math channels, evaluate resultant data, prepare for the next test event. 32. Question: Statement of Work CLIN 0001, Section 5.8.2: Are there any previous data formats available today for which need to be accounted for. 32. Answer: Yes, the structure will be provided with GFE. 33. Question: Statement of Work CLIN 0001, Section 5.10.1: Can YTC provide BOP Algorithm by 10 June 2005. 33. Answer: No, it will be provided after contract award. 34. Question: Statement of Work CLIN 0001, Section 5.12.2: Can we get a sample Error worksheet by 10 June 2005. 34. Answer: No, it will be provided after contract award. 35. Question: Statement of Work CLIN 0001, Section 5.12.3: Can we get a sample Error worksheet by 10 June 2005. 35. Answer: No, it will be provided after contract award. 36. Question: Statement of Work CLIN 0001, Section 5.12.4 – Can we get a sample Error worksheet by 10 June 2005. 36. Answer: No, it will be provided after contract award. 37. Question: Statement of Work CLIN 0001, Section 5.15.1: Is Ethernet access limited within a LAN. Does the Ethernet access have to occur across firewalls? Does the Ethernet access have to occur across routers. Does YTC anticipate supplier will coordinate with YTC IT personnel with regards to this requirement. 37. Answer: Yes, Possibly, Yes, Most Likely. 38. Question: What is the expected timeframe for CLIN 0002. 38. Answer: Please see No. 2. 39. Question: How do we demonstrate the certified software expectation to fully succeed using the GFE in CLIN 0002. 39. Answer: Please see No. 44. 40. Question: How do you quantify improved productivity. 40. Answer: Please note that Sections 1, 2, and 3 are provided as general information to give you an idea of our overall basis for this project, its intent, objectives and scope. Sections 4. through 11. present specific requirements. 41. Question: How do I get a copy of the Weibel W700 velocimeter users/operators guide for basing the software development estimates. 41. Answer: We were unable to get authorization to distribute the manual prior to contract award. As a result, we cannot provide the list of text commands that are sent to the W700, the full list of its text responses and text data results, or the format of the digitized raw Doppler file that is

downloaded to the PC, which uses the text results to display them graphically. Note: Please also see No. 63. 42. Question: CLIN 0002: Does YTC have a preferred digitizer identified that works with the PFI 28000. 42. Answer: No specific digitizer preference for CLIN0002. 43. Question: Please confirm that no sensors are to be provided by supplier for CLIN 0002. Is supplier required to run cabling that is external to test rack. Is supplier required to install sensors. Is there a desired delivery date. 43. Answer: a. No sensor or transducer or its installation is required for this contract. YTC has these. b. External cabling. Yes. External wiring is desired for signals and power. Please see No. 52 and No. 58. c. Desired delivery date targets, See No. 2. 44. Question: What does the following mean. Statement of Work CLIN 0002, Section 3 A first key milestone shall initially demonstrate and certify software expectation to fully succeed using the GFE. 44. Answer: This means that we need you to solidly assure and certify that our GFE will be fully functional/operable with the new system and that the system will not be degraded by the GFE. We will send you the GFE to work with and assist as appropriate. The first effort must be to make sure you can employ each of the equipment items. This is likely to include some initial familiarization, planned experimenting, and a brief report (first key milestone). The report style is up to you. It must identify the GFE items and positive assurance that you can or cannot complete the project with the GFE. The report may also describe how you evaluated the GFE (procedure), any criteria for making your determination, results, and conclusions. 45. Question: Statement of Work CLIN 0002, Section 3.1 - What are the configurations (quantity of each signal/channel type) of each of the system types. These are necessary for developing an accurate material list. 45. Answer: Please see 11.2. 46. Question: Statement of Work CLIN 0002: Section 3.1 indicates that 20 data acquisition systems could be acquired over the contract time frame. Section 11.2 identifies the desired characteristics of four data acquisition systems. Section 4.2.1 indicates that each signal conditioning channel should be capable of supporting any of the four input types. Section 11.2 indicates that signal conditioning channel input will be specifically identified for each data acquisition procured. What mechanism should be employed to define the signal conditioning input characteristics and digitization sizing for the 16 potential systems still to be acquired. 46. Answer: The first article system, 11.2.a. is intended to be the first of up to 20 scaleable systems, including all engineering. As mission and budget permit, we intend, over several years, to order up to 19 remaining systems that will be various quantities of three sizes of production systems. These production systems are described in 11.2.b., 11.2.c., and 11.2.d. In addition, we would like to have a means to get further help from you such as extra hardware and engineering for future capability upgrades. Sections 4. and 5. mention upgrades and future options. We welcome inclusion of any enhanced capability options in your proposals and at least desire proposed options/methods to acquire future capability upgrades. 47. Question: Statement of Work CLIN 0002, Section 3.2.e: What timing resolution/accuracy is required for precisely programmed prefire, fire, and post fire times. 47. Answer: Please see Section 4.6. 48. Question: Statement of Work CLIN 0002, Section 3.2.i and Section 4.2.2.4.c: Please define the system input/output panel requirements (connector types and quantity). 48. Answer: Please see No. 58. 49. Question: Can the language be more specific since this will be a firm fixed price contract. At least is ambiguous. Statement of Work CLIN 0002, Section 3.4 Documentation At least the following documentation is required and Section 3.5 Training Training shall

consist of at least... 49. Answer: Sections 1, 2, and 3 are provided as general information to give you an idea of our overall basis for this project, its intent, objectives and scope. a. Specifics for documentation are outlined at 6. b. Specifics for training are presented at 7.

50. Question: Statement of Work CLIN 0002, Section 3.5: Is the training to be performed at YTC. Immediately following the First Article Testing. 50. Answer: In general, correct. Training is planned to follow first article testing to effectively and best use your and our personnel. Some additional details will likely need to be worked out prior to delivery because of software reloading and potential opportunity for pre acceptance familiarization if preliminary self help training is feasible. The intent of initial familiarization is to get maximum knowledge and skills from your training services for the trainees who will become the teachers for the rest of our technicians. 51. Question: Under Performance requirements, CLIN 0002, Section 4 Performance Requirements: Is YTC supplying all hardware to meet performance specification. 51. Answer: No. We intend that you select and provide all hardware except those identified as GFE. 52. Question: Statement of Work CLIN 0002, Section 4.2.2.4.g: Is there a requirement for system safety/emergency switch red mushroom. Is there a requirement for the system power cord length, connector, quick disconnect, etc. Is there a requirement for external grounding of the system: i.e. Pigtail. How is the connection to be made. 52. Answer: Please note Section 4.2. covers signal conditioning. a. The red mushroom safety switch is intended for the operator to cause an abort of the sequencing functions, particularly weapon fire or other external-user instrument start signals. We desire that you design the most effective method for a signal from this switch to halt the sequencing functions. b. Power cord preference is for a single main cord, 6 feet-long, with NEMA L5-30 twist-lock male plug. c. No other system grounding requirements except via power cord. 53. Question: Statement of Work CLIN 0002, Section 4.3.1.9: Please verify, are on board memory requirements per channel or per board as seen in Statement of Work CLIN 0002 paragraph 4.3.1.9. 53. Answer: CLIN0002: Per channel. As indicated at 4.3.1.9. 54. Question: Statement of Work CLIN 0002, Section 4.5 - What are the drawer dimensions required for the storage of the radar velocimeter. Are there any special storage requirements. 54. Answer: The velocimeter nominal case dimensions are inches: a. W700: 4H x 7W x 11D. b. JB5000 - 4H x 15W x 14D. 55. Question: Statement of Work CLIN 0002, Section 4.8: Are there positioners in use today. Is there a preferred vendor for the positioner. 55. Answer: a. Yes, we have two broadcast antenna positioners. One is still in service. We purchased them a few years ago to rapidly meet an emergent need. Their durability and performance barely satisfied mission requirements. We expect they will be unsuitable in the near future. b. Although we researched some candidates, we have no preferred model or vendor at this time. 56. Question: Statement of Work CLIN 0002, Section 4.9.4: Can YTC reinstall its OS and baseline on the boot drive of each system PC prior to development instead of after delivery. 56. Answer: Regrettably, no. This is driven by our current IT security policies and network management officers. 57. Question: Statement of Work CLIN 0002, Section 4.12.a: Is the cabinet 26 inches (vs 30 inches or 36 inches) deep. What is the maximum allowable cabinet depth. Would 30 inch or 36 inch depth cabinets be acceptable. 57. Answer: Correct. Required cabinet depth is nominal 26 inches from front to back. This is needed to fit isolated platforms in vans and allow clearance between racks and wall for cabling and service access. 58. Question: Given the statements in the Statement of Work CLIN 0002, Section 4.12.b What is the

desired interface mechanism between the ballistic data acquisition system and the field sensors that will be connected to they system. 58. Answer: We desire that you provide signal input cable assemblies that will connect our van/facility wall bulkhead panels to the signal conditioner inputs supplied. These assemblies need to be 16 feet long and set up as follows per assembly. a. Charge/IEPE. Four coaxial 50 Ohm cables (such as RG58), 2 charge and 2 IEPE. Transducer ends terminated with male BNC connectors and permanent channel ID labels. Card end terminated with mating connector for dual mode card. b. Bridge/Voltage. Twisted, individually-shielded 24 AWG pairs plus shield wire. Teflon insulated. Two channels per assembly. Each channel consists of 10-conductor bridge wiring plus shield wire. Transducer ends terminated with half inch bare, tinned conductors and one and one half inch of insulated single strands with ID label/tag on each strand. Card end terminated with mating connector for bridge card. 59. Question: Statement of Work CLIN 0002, Section 4.12.d: How is the unit to be moved/installed. Via pallet. Are lifting eyebolts a consideration. 59. Answer: Pallets are preferred. One rack bay per pallet. Lifting eyes are unlikely to be helpful for us. Our overhead clearances are limited to about 8 feet (less in vans) and we don't have proper lifting gear for this usage. Although early to define exactly, van installation method is likely to consist of: Forklift rack and pallet deck to floor height of van, which is about 4 and one half feet above level grade. Release the rack bay, slide into van, and place on isolated floor glide platform. Repeat for 2nd rack bay, if needed. Fasten rack bays to each other and bolt to isolated platform. Secure isolated upper locking hardware to upper sides of rack(s). 60. Question: Statement of Work CLIN 0002, Section 5.2.3: Is remote control access limited within a LAN. Does the remote control access have to occur across firewalls. Does the remote control access have to occur across routers. Does YTC anticipate supplier will coordinate with YTC IT personnel with regards to this requirement. 60. Answer: Yes, Possibly, Yes, Most Likely. 61. Question: Statement of Work CLIN 0002, Section 5.3.3.f: Indicates that TEDS is NOT PART OF SCOPE. CLIN 0001, Page 8, Section 5.6.5 states The software shall be capable of accepting gage factors provided by... TEDS. Are we to understand TEDS is out of scope for the hardware, but in scope for the software. 61. Answer: a. CLIN0001 and CLIN0002 are separate requirements for separate hardware systems. b. CLIN0002. Not part of scope for first article system hardware and software. YTC desires an option, method, CLIN proposed to accomplish future improvements, including TEDS. 62. Question: Statement of Work CLIN 0002, Section 5.4.2.3.d: Can YTC provide a sample Excel Spreadsheet chronography data sheet in electronic format by 10 June 2005. 62. Answer: Yes. A notional example will be located at our web site <http://www.yuma.army.mil/contracting/index.html>. 63. Question: Statement of Work CLIN 0002, Section 8: Can YTC provide users manual at same time as GFE. Will YPG make copies of referenced documents available. 63. Answer: Yes. YTC will provide any available documentation with the GFE. In limited cases some GFE detailed design data may be withheld or provisions for confidentiality may be required to protect the OEMs.